

## EDUC90668 Teaching Statistics and Probability

<b>Credit Points:</b>	12.5
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2016.
<b>Time Commitment:</b>	Contact Hours: 24 Total Time Commitment: 170 hours
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	Knowledge of mathematics to Year 10 level, and general knowledge of teaching practices in any subject.
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.&lt;/p&gt;         &lt;p&gt;It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>
<b>Contact:</b>	This subject is not offered in 2016.
<b>Subject Overview:</b>	<p>This subject examines the teaching of probability and statistics in junior secondary school from all perspectives. There will be a focus on the importance of teaching in context and on developing students' ability to communicate quantitative information clearly and correctly. It introduces the notion of statistical literacy and the importance of embedding the teaching of chance and data within real world contexts, developing students' critical thinking and ability to discuss, display and interpret quantitative data. Particular attention will be given to misconceptions commonly associated with measurement and chance. Strategies for engaging students in real problems, including practical work will be discussed. Participants will study the use of statistics software for teaching. Assessment practices of, for and as learning and effective questioning and orchestrating discussion is a focus. Practical teaching tasks will complement theory. Students will be expected to participate in intensive teaching, complete weekly exercises to satisfactory standard and regularly contribute to the electronic forum.</p>
<b>Learning Outcomes:</b>	<p>On completion of this subject, participants will be able to:</p> <ul style="list-style-type: none"> <li># Discuss assessment practices ('of' and 'for' and 'as' learning);</li> <li># Demonstrate understanding of statistical literacy and critical thinking;</li> <li># Design experiments to collect data; displaying and interpreting quantitative data; descriptive statistics; probability concepts</li> <li># Discuss junior secondary mathematics and associated issues in the light of contemporary national and international curriculum documents;</li> <li># Demonstrate effective use of technology: spreadsheets, graphics calculators, internet for teaching</li> <li># Discuss effective questioning and orchestrating productive classroom discussion.</li> <li># Explain how the goals of working mathematically can be achieved through the teaching of chance and data.</li> </ul>
<b>Assessment:</b>	<p>Data collection and analysis task with reflective commentary (3000 words) due mid semester ( 60%) An issues paper illustrating student thinking and appropriate pedagogy. (2000 words) due end of semester. (40%) Hurdle Requirement. Students will be required to demonstrate an adequate level of mastery of mathematics knowledge at an advanced Year 10 level through</p>

	successful completion of a written test. This subject has a minimum hurdle requirement of 80% attendance at all tutorials, seminars and workshops.
<b>Prescribed Texts:</b>	Goos, M., Stillman, G., & Vale, C. (2007). Teaching secondary school mathematics: Research and practice for the 21st century. Sydney: Allen & Unwin Further readings will be provided. Special requirement Years 7-10. Handheld calculator or computer software recommended for use in the VCE subject Further Mathematics
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<ul style="list-style-type: none"> <li># Be skilled communicators who can effectively articulate and justify their mathematics teaching practices;</li> <li># Understand the significance of developing their mathematics teaching practice on the basis of research evidence;</li> <li># Demonstrate mastery of the subject matter for this area of teaching and of general principles of effective teaching and learning in a mathematics context, including with technology.</li> </ul>